

Collaboration inspires nuclear engineering student Alexis Kaplan

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Researcher designs a system that improves nuclear energy security

When her state suffered from major blackouts during an energy crisis a decade ago, California native Alexis Kaplan was inspired to pursue her nuclear degree.

“I couldn’t understand why we had a shortage of energy when so much power could come from nuclear fission,” said Kaplan.

Kaplan—working towards her doctorate in nuclear engineering at the University of Michigan and a Los Alamos research assistant—is committed to making the world more secure.

A proponent of combining nuclear and renewable energy to meet global energy needs and improving their sustainability, Kaplan is equally committed to developing methods to secure spent nuclear fuel. And she says the Lab's multidiscipline and cooperative environment is the perfect nexus to develop the technologies needed to meet these goals.

Kaplan's Los Alamos interdisciplinary team is designing and building a prototype system and perfecting detection methods that will measure nuclear reactors' spent fuel—vital to ensure radioactive materials have not been stolen and potentially used to make weapons. The system's verification may support the International Atomic Energy Agency (IAEA) during facility inspections, protecting the world from nuclear proliferation.

Inspired by the world-class nuclear research environment and invigorated by the small city's proximity to outdoor activities—including her favored hiking, rock climbing and snowboarding—the Berkeley graduate plans to pursue a nonproliferation career in this scientific hub.

"Some people think it's bad that there are only one or two places to hang out at night, but I think it's great," Kaplan added about the mountain town tucked into the Jemez Mountains, where relaxed conversations on a ski lift or coffee shop are likely to spur novel innovations. "You get to see everyone and you're always likely to run into friends."

And just as Los Alamos stimulates a scientific culture connected to the natural world, it also nurtures a collaborative environment.

"I love this lab. I feel like I have 4 or 5 mentors," Kaplan adds. "That is one of my favorite things about LANL; so many people are interested in my project and are all willing to help." » [Return to homepage](#)

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